

**IN THE CLAIMS:**

Claims 1-19 (Previously canceled)

20. (Currently pending). A method for inducing the re-expression of a previously silenced endogenous gene encoding human sodium/iodide symporter in a human thyroid carcinoma cell comprising administering to the cell a compound selected from the group consisting of 5-azacytidine, sodium butyrate, dimethylsulfoxide, adenosyl-1,8-diamino-3-thio-octane, and phenylacetate.

21. (Currently pending. The method of claim 20 wherein the thyroid carcinoma cell is a thyroid typical papillary carcinoma cell or a follicular carcinoma.

22. (Currently pending). The method of claim 20 wherein re-expression is effected by demethylating the previously silenced endogenous gene or by inhibiting methylation in the cell.

23. (Currently pending). A method for restoring iodide transport to a human thyroid carcinoma cell comprising administering 5-azacytidine to the cell in an amount effective to transcriptionally activate the expression of a gene encoding the human sodium/iodide symporter.

24 (Currently pending). A method of restoring iodide transport to a human thyroid carcinoma cell comprising administering difluoromethylornithine or S-adenosyl-1,8-diamino-3-thio-octane to the cell in an amount effective to transcriptionally activate the expression of a gene encoding the human sodium/iodide symporter.